

**FINGER METAL-INSULATOR-METAL CAPACITOR
DEVICE WITH LOCAL INTERCONNECT**

Inventors: Lenvis Liu 劉光文

Chong Jen Hwang 黃仲仁

5

RELATED APPLICATION DATA

[0001] This application is a division of U.S. Patent Application No.
10/077,450 entitled "Finger Metal-Insulator-Metal Capacitor with Local
10 Interconnect," filed 15 February 2002. *ABN*

BACKGROUND OF THE INVENTION

[0002] One essential component of integrated circuits is a capacitor. Design
and production of capacitors trades off capacity and footprint (together determining
15 density) with manufacturing processes. There will always be an opportunity to
introduce a better capacitor design and manufacturing process.

SUMMARY OF THE INVENTION

[0003] The present invention includes methods to produce a finger metal-
20 insulator-metal capacitor. One plate can either be a base conductive layer or
overlying or an additional, deposited layer. Capacitor formation may be integrated
with formation of interconnects for other components on the same die. The resulting
capacitor has a novel geometry. Particular aspects of the present invention are
described in the claims, specification and drawings.

25

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] FIG. 1 is a cross section of a die with some devices already formed
and covered by an insulator.

[0005] FIG. 2 is a cross section of the same die, with contacts formed and a
30 resist layer patterned.